

SEQUENCE LISTING

<110> Cahoon, Edgar B

<120> A Cytochrome P450 enzyme associated with the synthesis of Δ^{12} -epoxy fatty acids

<130> BB1465 US NA

<140>

<141>

<150> 60/219833

<151> July 21, 2000

<160> 7

<170> Microsoft Office 97

<210> 1

<211> 1733

<212> DNA

<213> Euphorbia lagascae

<400> 1

```
gcataaaagg aaaatggagc agaaaaatct ctcttttccg agcattttaa taagttttct 60
gcttggtttta atctttagtag tagtcatgag gttgtggaag aaacagaatc cacctccagg 120
gcoatggaag ttctctatca tagttaatct tctctattta ttactcactt ctgatctagg 180
ccatgaacgt tttagagcct tggtctaaat ttatggacct gttatgagtc ttcaaatgtg 240
ccaagtttca gctgtgttca ttcttccagc tgaagcagcc aaagagggtta tgaaaactca 300
ggctgatgcc ttgcgccaac gccctatcgt cttggacgca cagattgtgt ttataatcgc 360
gaaagatgct ttgtttgtct catatggaga tcactggagg cagatgaaga aaatttggat 420
acttgaattt ctgagtgcga aaaaagtcca atcctccagg ttaatccgag aggaagaat 480
ggaggatgcc atcacattcc tccgttcgaa agccggatct ccggtcaata ttacaagat 540
catttatggc attataattt ccatcatgat aagaacatcc gttggttaatt gtaagcaaaa 600
agaaagattg ctgagtgttg ccgatgcagt caatgaggca ggcagcagtt ttggcacccg 660
agacgctttt ccgacgtgga aattacttca ctatcatcatt ggagctgagt caaaaccagg 720
gcgtttgcac caggagattg acgatatact tgaagagatt cttaatgaac acaaaagcca 780
taagcctttt gaagcggata acttaatgga tgttctattg aatcttcaaa aaaaaggaaa 840
cgttcocagt caggtgacaa acgaaaagcat caaagcatcc gttttgaaa tgtttactgc 900
cgggagcgaa acaacttcga aagctacaga atgggtaatg gcagagctga tgaanaatcc 960
aactgaacta agaaaagcac aagaagaagt tagacaagta tttggtgaaa tgggaaaagt 1020
tgatgaacta agatttcacg atttgaaatt ctcaagttta gtggttaaaag aaactctaag 1080
attacatcct ccggttgtct tgattccgag ggaggttaga gaaacaaac gaatttgatg 1140
atatgaaatt catccgaaca ctcgaaattg tgtgaatgct tggcgcatag gaagagatcc 1200
taatacttgg tcggaacctg gaaagttaa cccagaaagg ttaaaagatt gtgcaattga 1260
ttataaagcg acgacatttg aactggtacc atttggtgca gtaaaaagaa tatgtcctgg 1320
cattacttca gctattacca atttggagta tgtcattata aatctattat atcattttaa 1380
ttgggaactg gccgatggaa ttacacctca aacacttgat atgactgaag ctattggcgg 1440
tgctctcagg aaaaaaatag atcttaagtt gattcttatt ccatatcaag ttactgttag 1500
ctcaaatatt tcttgattac ataggagggt tgaatatata ataataaact ttaataaacg 1560
atgttctaet atgggtttgg tgagtataaa taggttttcc accgatcata taagtgcct 1620
ctttgatgg atgggttaag ttataatgag ttgtgggttg gattttttag tgggttaaat 1680
gatttgatg gataataata aattgaaagt ttttctttt caaatccgaa aaa 1733
```

<210> 2

<211> 500

<212> PRF

<213> Euphorbia lagascae

2025

2

Thr Glu Trp Val Met Ala Glu Leu Met Lys Asn Pro Thr Glu Leu Arg
 305 310 315 320
 Lys Ala Gln Glu Glu Val Arg Gln Val Phe Gly Glu Met Gly Lys Val
 325 330 335
 Asp Glu Ser Arg Phe His Asp Leu Lys Phe Phe Lys Leu Val Val Lys
 340 345 350
 Glu Thr Leu Arg Leu His Pro Pro Val Val Leu Ile Pro Arg Glu Cys
 355 360 365
 Arg Glu Thr Thr Arg Ile Asp Gly Tyr Glu Ile His Pro Asn Thr Arg
 370 375 380
 Ile Val Val Asn Ala Trp Ala Ile Gly Arg Asp Pro Asn Thr Trp Ser
 385 390 395 400
 Glu Pro Gly Lys Phe Asn Pro Glu Arg Phe Lys Asp Cys Ala Ile Asp
 405 410 415
 Tyr Lys Gly Thr Thr Phe Glu Leu Val Pro Phe Gly Ala Gly Lys Arg
 420 425 430
 Ile Cys Pro Gly Ile Thr Ser Ala Ile Thr Asn Leu Glu Tyr Val Ile
 435 440 445
 Ile Asn Leu Leu Tyr His Phe Asn Trp Glu Leu Ala Asp Gly Ile Thr
 450 455 460
 Pro Gln Thr Leu Asp Met Thr Glu Ala Ile Gly Gly Ala Leu Arg Lys
 465 470 475 480
 Lys Ile Asp Leu Lys Leu Ile Pro Ile Pro Tyr Gln Val Ser Leu Gly
 485 490 495
 Ser Asn Ile Ser
 500

<210> 3
 <211> 502
 <212> PRT
 <213> Capsicum annum

<400> 3
 Met Glu Ile Gln Phe Thr Asn Leu Val Ala Phe Leu Leu Phe Leu Ser
 1 5 10 15
 Ser Ile Ile Leu Leu Lys Lys Trp Lys Thr Gln Lys Leu Asn Leu
 20 25 30
 Pro Pro Gly Pro Trp Lys Leu Pro Phe Ile Gly Ser Leu His His Leu
 35 40 45
 Ala Val Ala Gly Pro Leu Pro His His Gly Leu Lys Asn Leu Ala Lys
 50 55 60
 Leu Tyr Gly Pro Leu Met His Leu Arg Leu Gly Glu Ile Pro Thr Val
 65 70 75 80

Ile Gly Arg Asp Pro Glu Ser Trp Asp Asp Pro Glu Ser Phe Ser Pro
 405 410 415
 Glu Arg Phe Glu Asn Ser Ser Val Asp Phe Leu Gly Ser His His Gln
 420 425 430
 Phe Ile Pro Phe Gly Ala Gly Arg Arg Ile Cys Pro Gly Met Leu Phe
 435 440 445
 Gly Leu Ala Asn Val Gly Gln Pro Leu Ala Gln Leu Leu Tyr His Phe
 450 455 460
 Asp Arg Lys Leu Pro Asn Gly Gln Ser His Glu Asn Leu Asp Met Thr
 465 470 475 480
 Glu Ser Pro Gly Ile Ser Ala Thr Arg Lys Asp Asp Leu Val Leu Ile
 485 490 495
 Ala Thr Pro Tyr Asp Pro
 500

<210> 4
 <211> 51
 <212> DNA
 <213> synthetic construct

 <400> 4
 tcaaggagaa aaaaccccg atccatggag cagaaaaato tctcttttcc g 51

 <210> 5
 <211> 35
 <212> DNA
 <213> synthetic construct

 <400> 5
 ggccagtga ttgtaatacg actcactata gggcg 35

 <210> 6
 <211> 35
 <212> DNA
 <213> synthetic construct

 <400> 6
 gcggccgcga attcggaaaa tggagcagaa aaatc 35

 <210> 7
 <211> 35
 <212> DNA
 <213> synthetic construct

 <400> 7
 gcggccgcgg atccttagaa catcgtaaat taaag 35